

PERFORMANCE SPECIFICATION

RESISTORS, FIXED, FILM, NON-ESTABLISHED RELIABILITY, ESTABLISHED RELIABILITY, AND SPACE LEVEL, GENERAL SPECIFICATION FOR

This amendment forms a part of MIL-PRF-55182G, dated 9 June 1997, and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 6

* 3.4, delete in its entirety and substitute:

"3.4 Materials. Materials shall be used which will enable the resistors to meet the performance requirements of this specification. Acceptance or approval of any constituent material shall not be construed as a guaranty of the acceptance of the finished product."

PAGE 16 and PAGE 17

TABLE XI, delete and substitute:

"TABLE XI. Qualification inspection."

Inspection	Requirements paragraph	Method paragraph	Number of samples	Number of defects permitted
<u>Certification requirements</u>				
Aqueous-extract-conductivity <u>1/</u>	3.5.1	4.8.27		<u>2/</u>
Flux <u>1/</u>	3.5.4			
Outgassing (space level only)	3.32	4.8.26		
<u>Group I</u>				
Visual and mechanical examination <u>3/</u>	3.1, 3.4, 3.5, 3.5.1.1 through 3.5.3.2 inclusive, 3.5.5, 3.31, and 3.32	4.8.1	All sample units	N/A
Thermal shock <u>4/</u>	3.8	4.8.2		
Overload <u>4/</u>	3.9	4.8.3		
DC resistance <u>4/</u>	3.11	4.8.5		
Hermetic seal (when applicable) <u>4/</u>	3.12	4.8.6		
<u>Group IA</u>				
Solderability	3.13	4.8.7	12 sample units	0
Resistance to solvents	3.14	4.8.8		

See footnotes at end of table.

AMSC N/A

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FSC 5905

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"TABLE XI. Qualification inspection. - Continued.

Inspection	Requirements paragraph	Method paragraph	Number of samples	Number of defects permitted
<u>Group II</u> Resistance temperature characteristics	3.15	4.8.9		<u>5/</u> 1
Low temperature storage	3.29	4.8.23	10 highest	
Low temperature operation	3.16	4.8.10	30 10 critical	
Terminal strength	3.17	4.8.11	10 lowest	
Hermetic seal (when applicable)	3.12	4.8.6		
<u>Group III</u> Dielectric withstanding voltage	3.18	4.8.12	10 highest	
Insulation resistance	3.19	4.8.13	30 10 critical	
Resistance to soldering heat	3.20	4.8.14	10 lowest	
Moisture resistance	3.21	4.8.15		
<u>Group IV</u> Shock (specified pulse)	3.22	4.8.16	10 highest	
Vibration, high frequency	3.23	4.8.17	30 10 critical	
Hermetic seal (when applicable)	3.12	4.8.6	10 lowest	
<u>Group V</u> Life	3.24	4.8.18	34 highest 102 34 critical 34 lowest	1
<u>Group VA</u> 6/ +70°C power rating	3.24.3	4.8.18	34 highest 102 34 critical 34 lowest	1
<u>Group VI</u> High temperature exposure	3.25	4.8.19	34 highest 7/ 102 34 critical 34 lowest	1
<u>Group VII</u> Voltage coefficient (applicable to resistors of 1,000 ohms and over)	3.26	4.8.20		0
Fungus	3.27	4.8.21	10 highest	
Mechanical shear (when applicable)	3.28	4.8.22		

See footnotes at end of table.

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"TABLE XI. Qualification inspection. - Continued.

Inspection	Requirements paragraph	Method paragraph	Number of samples	Number of defects permitted
<u>Group VIII (space level only)</u> Thermal shock (100 cycles)	3.8	4.8.2	10 highest 30 10 critical 10 lowest	0

- 1/ The manufacturer shall verify by certification that these requirements have been met in fabricating resistors furnished to this specification.
- 2/ Failure of a resistor in one or more tests of a group shall be charged as a single defect.
- 3/ Marking shall be considered defective if the marking is illegible or incorrect. The two additional unenclosed sample units shall be subjected to the visual and mechanical examination of group I only. Marking shall remain legible at the end of all tests.
- 4/ As an option, the manufacturer may perform group A, subgroup 1 tests with the required PDA in lieu of these tests.
- 5/ For characteristic C and characteristic E, zero failures are permitted in moisture resistance.
- 6/ The power rating shall be +70°C. Qualification inspection only.
- 7/ Ten sample units shall be subjected to dielectric withstanding voltage and insulation resistance following this test."

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TABLE XV, add the following new sentence to end of NOTE 1:“(NOTE: Not applicable to space level.)”

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- * TABLE XVII, delete and substitute:

"TABLE XVII. Overload.

Resistor style 1/	Overload and duration	Maximum voltage (ac or dc)
RNR50, RNR55, RNR57, RNR60	5 X rated power for 1 hour	<u>Volts</u> 500
RNR65	4 X rated power for 1 hour	600
RNR70	2.25 X rated power for 1 hour	700
RNR75	2.25 X rated power for 1 hour	1,000
RNR77	1.25 X rated power for 1 hour	1,000

1/ Third letter is variable, dependent upon lead material or capability."

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PAGE 28

4.8.6.b, delete and substitute:

"b. Group I qualification inspection and group A inspection: Method 112 of MIL-STD-202, test condition A or the manufacturer's own procedure, provided the hermetic seal test has been approved by the qualifying activity."

PAGE 29

4.8.9.c, first sentence, delete "+1°C" and substitute "±3°C".

PAGE 31

* 4.8.14.c, after test condition C, delete "(+260°C ±5°C, 10 seconds ±2 seconds)".

PAGE 45

Add the new paragraph:

"A.3.3 Outgassing (space level only). Manufacturers shall validate to the qualifying activity the outgassing requirements as specified in 3.32."

Custodians:

Army - CR
Navy - EC
Air Force - 85
NASA - NA

Preparing activity:

Army - CR

Agent:

DLA - CC

Review activities:

Army - AR
Navy - AS, CG, MC, OS
Air Force - 17, 19, 99

(Project 5905-1552)